



Editorial

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Alkaloids: potential therapeutic modality in the management of asthma

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Alkaloids are very important group of chemical compounds; approximately 12,000 in number, having application in different areas of the economy, industry, trade, and services. The widespread therapeutic potential of alkaloids are already been reported in literature since time immemorial.

Asthma is characterized as a chronic inflammatory allergic disease described by airway hyperreactivity (AHR), eosinophil tissue infiltration and lung remodeling^[1]. Right from the time of Aretaeus, the Cappadocian, in approximately 100 A.D., asthma has been portrayed as a medical entity and since then multiple approaches have been employed to treat it^[2]. Over the last 100 years, it has been recognized that asthma may be precipitated by certain environmental exposures and that eliminating these exposures may be of value in asthma treatment^[3].

The alkaloids have shown historical role in the management of asthma in various forms (e.g. fumes from burnt *Atropa belladonna*) in different cultures. Alkaloids such as vasicine, l-vasicinone, deoxyvasicine, maiontone, vasicinolone, vasicinal, moringine showed bronchodilatory effects, trigonelline reduced congestion in airways, dergamine and piperine act as respiratory stimulant and many more with potential role in the effective management of asthma.

Over the years, corticosteroids, long-acting β -agonists are extensively used but still having many this and that because asthma is not mere a biochemical or immunologic disease but a syndrome with multiple environmental and genetic determinants, The decisive goal of understanding these multiple mechanistic pathways in asthma is to discover novel better and more effective targeted therapies that specifically acting the epidermal growth factor receptor, arginase or plasminogen activator systems, or yet unidentified disease pathogenesis pathways, may lead to better disease control and perhaps the reduction and elimination of the need for corticosteroids. These goals can be achieved effectively while extensively exploring the natural treasure available in the form of alkaloids as having dynamic past.

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